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10/510,954	10/29/2004	Nobuhiko Takehara	261163US90PCT	5310
22850 7590 05/30/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MEYERS, JAMES A	
			ART UNIT	PAPER NUMBER
			2609	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/510,954

Applicant(s)

TAKEHARA ET AL.

Examiner

James A. Meyers

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-21 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/3/2004, 6/15/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the initial filing of October 29, 2004. Claims 1-14 and 16-22 are pending and have been considered below.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "S1" through "S15" have been used to designate different steps in Figures 7 and 15. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 33a, mentioned on page 9, line 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
4. On page 4, line 11, the word "mage" should be "image". On page 9, line 20, the fourth word should be "shifts". On page 27, line 6, "+/- 1" should be "+/- l". On page 37, line 8, "provideod" should be "provided". The specification contains numerous acronyms (CCD, CD-ROM, etc.) without first including a description in plain text, as required. Appropriate correction is required.

Claim Objections

5. Claims 1, 2, 6, 7, 9, and 19 are objected to because of the following informalities: In Claim 1, line 10, it is not clear to what feature the word "its" is referring; Claim 2 appears to be missing the word "sending" between "for" and "said" on line 6; the word "to" in Claim 6, line 1 appears to be included due to a typographical error; in Claim 6, line 20, it is not clear to what feature the word "its" is referring; in Claim 7, line 25, "vide" should be "video"; Claim 9, lines 4-6 should be corrected for grammar; in Claim 19, line 17, "th" should be "the". Appropriate correction is required.

6. Claim 22 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits. The Examiner notes that if Applicant changes the claim dependency without further amending the claim, Claim 22 will be directed towards non-statutory subject matter. Claim 22 will also fail to further limit all claims upon which it is currently dependent.

Claim Rejections - 35 USC § 102

7. Examiner's Note: The Applicant appears to be attempting to invoke 35 U.S.C. 112 6th paragraph in Claims 16-21 by using "means-plus-function" language. However, the Examiner notes that the only "means" for performing these cited functions in the specification appear to be computer program modules. While the claims pass the first two tests of the three-prong test used to determine invocation of paragraph 6, since no other structural limitations are disclosed in the specification, the claims do not meet the third test of the three-prong test. Therefore, 35 U.S.C. 112 6th paragraph has not been invoked when considering these claims below.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hendricks et al. (WO 99/12349).

Claim 16: Hendricks discloses an image capturing device comprising:

(a) means for receiving variation information signals from a plurality of user terminals (page 7, 2nd paragraph);

(b) means for generating a capturing signal to be used for capturing a video signal of part of a panoramic object (page 19, last paragraph);

(c) means for sending said generated capturing signal and the corresponding user terminal ID information to a remote camera (sensing device) (page 7, 2nd paragraph); and

(d) means for receiving the video signal and the corresponding user ID info from the remote camera (page 20, 1st paragraph) and sending the video signal to image display means of the user terminal corresponding to the user terminal ID information (page 22, 1st paragraph).

Claim 17: Hendricks discloses an image capturing device as in Claim 16 above and further discloses that:

(a) the variation information is a direction information signal and/or a zoom signal of the partial object (page 19, last paragraph onto page 20); and

(b) the capturing signal generating means is a means for generating an extracting reference pixel position signal obtained by correcting a previous signal

according to the direction information and/or image zoom in/out signal according to the zoom information (page 22, 3rd paragraph).

Claim 18: Hendricks discloses an image capturing device as in Claim 16 above and further discloses:

(a) means in which there is stored ID information of each of plural camera devices in the remote camera angularly spaced apart in their shooting directions (page 19, last paragraph - while Hendricks does not explicitly disclose that ID information about the cameras is stored, for the system to be able to connect camera commands with the correct cameras, the ID information must inherently be stored in the computer);

wherein:

(b) the variation information is a direction information signal and/or a zoom signal of the partial object (page 19, last paragraph onto page 20); and

(c) the capturing signal generating means is a means for generating an extracting reference pixel position signal obtained by correcting a previous signal according to the direction information and/or image zoom in/out signal according to the zoom information (page 22, 3rd paragraph).

Claim 19: Hendricks discloses an image capturing device comprising:

(a) (a) means for receiving variation information signals from a plurality of user terminals (page 7, 2nd paragraph);

(b) means for generating a capturing signal to be used for capturing a video signal of part of a panoramic object (page 19, last paragraph);

(c) means for sending said generated capturing signal and the corresponding user terminal ID information to a remote camera (sensing device) (page 7, 2nd paragraph);

(d) means for receiving the video signal sent from the remote camera (page 20, 1st paragraph);

(e) means for capturing the video signal of a part of the panoramic object from the received video signal based on the capturing signal (page 22, 3rd paragraph); and

(f) means for sending the video signal to image display means of the user terminal corresponding to the user terminal ID information (page 22, 1st paragraph).

Claim 20: Hendricks discloses an image capturing device as in Claim 19 above, wherein:

(a) the video signal is a panorama video signal (page 21, 2nd paragraph);

(b) the variation information is a direction information signal and/or a zoom signal of the partial object (page 19, last paragraph onto page 20);

(c) the capturing signal generating means is a means for generating an extracting reference pixel position signal obtained by correcting a previous signal according to the direction information and/or image zoom in/out signal according to the zoom information (page 22, 3rd paragraph); and

(d) the image capturing means is a means for capturing a partial image of the panorama video signal (page 22, 3rd paragraph).

Claim 20: Hendricks discloses an image capturing device as in Claim 19 above, wherein:

(a) the video signal received is video signals from a plurality of camera devices with their shooting directions angularly spaced apart (page 19, last paragraph); and which further comprises:

(b) means having stored herein ID information about the plurality of cameras and their shooting directions (page 19, last paragraph – while Hendricks does not explicitly disclose storing the ID information and shooting directions, for the system to function, the information must inherently be stored in the system);

(c) the variation information is a direction information signal and/or a zoom signal of the partial object (page 19, last paragraph onto page 20);

(d) means for generating a transmitting camera ID information signal corresponding to the shooting direction (page 22, 3rd paragraph – while Hendricks does not explicitly disclose generating a signal that transmits the camera ID information, such a signal must inherently be transmitted for the system to function correctly); and

(e) means for capturing one of a plurality of video signals corresponding to the camera ID information, and capturing a partial image of the video signal (page 22, 3rd paragraph).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. (WO 99/12349) in view of Hanson et al. (US 4,786,966).

Claim 1: Hendricks discloses a remote image display method comprising:

(a) image sensing a panoramic object by a remote image sensing device (page 21, section 4);

(b) sending a video signal of part of the sensed object via an image capturing device to image display means at a place different from the remote image sensing device (page 21, 2nd paragraph);

(c) playing back and displaying the received video signal by the image display means (page 22, 3rd paragraph); and

(d) sending a new image to the display means (page 21, 2nd paragraph).

While Hendricks does not disclose image sensing of its surroundings by a camera-equipped portable terminal, Hanson does disclose a remote image display method with a camera-equipped portable terminal sensing its surroundings at a position where the display on the image display means can be seen (column 5, line 63 to column 6, line 6 and Figure 3). Therefore, it would have been obvious to one having

ordinary skill in the art at the time of invention to include this feature of Hanson into the method of Hendricks. One would have been motivated to do so to allow users to control the camera without the need for a joystick or control pad.

Additionally, Hendricks does not disclose sending the surrounding video signal to the image capturing device. However, Hanson does disclose sending the surrounding video signal to the image capturing device (column 4, lines 4-26). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include this feature of Hanson into the method of Hendricks. One would have been motivated to do so to ensure that the device controlling the orientation of the remote camera received the command from the user.

Finally, Hendricks does not disclose obtaining variation information about the surrounding image from the camera-equipped portable terminal based on the previous video signal and the current video signal or obtaining from the remote camera a video signal of part of the object changed based on the variation information. However, in the system and method disclosed by Hanson, both features are inherently required for system to function. As Hanson discloses, existing systems have a link between the camera-equipped portable terminal (helmet) and a remote device (column 1, lines 42-51). For the remote device to be able to follow the helmet's movement, the helmet must be generating variation information about the surroundings based on the current and previous video signals. Additionally, the video signal returning from the remote device must be changing based on variation information, or the image on the screen will not change, making the system useless. Therefore, it would have been obvious to one

having ordinary skill in the art at the time of invention to include these two features in the method of Hendricks. One would have been motivated to do so because the features were required for successful operation of the remote imaging method as disclosed in Hanson.

Examiner's Note: The Applicant appears to be attempting to invoke 35 U.S.C. 112 6th paragraph in Claims 2-12 by using "means-plus-function" language. However, the Examiner notes that the only "means" for performing these cited functions in the specification appear to be computer program modules. While the claims pass the first two tests of the three-prong test used to determine invocation of paragraph 6, since no other structural limitations are disclosed in the specification, the claims do not meet the third test of the three-prong test. Therefore, 35 U.S.C. 112 6th paragraph has not been invoked when considering these claims below.

Claim 2: Hendricks discloses an image capturing device comprising:

(a) means for generating a capturing signal from variation information which is used to obtain the video signal of a part of a panoramic object (page 19, last paragraph);

(b) means for sending the capturing signal to the remote camera that performs image sensing (page 7, 2nd paragraph); and

(c) means for receiving the video signal from the remote image sensing device and sending it to the image display means (page 22, first paragraph).

Hendricks does not disclose means for receiving a surrounding video signal from a camera-equipped portable terminal. However, Hanson does disclose means for receiving a surrounding video signal from a camera-equipped portable terminal (column 2, lines 36-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the receiving means of Hanson into the device of Hendricks. One would have been motivated to include the receiving means into the device of Hendricks so that the control of the camera would not be limited to a joystick or other manual control.

Additionally, Hendricks does not disclose means for detecting information about a variation of the image of the current surrounding video signal from the previous image. However, such means are inherent in the system of Hanson. As Hanson discloses, existing systems have a link between the camera-equipped portable terminal (helmet) and a remote device (column 1, lines 42-51). For the remote device to be able to follow the helmet's movement, the helmet must be generating variation information about the surroundings based on the current and previous video signals. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include these two features in the method of Hendricks. One would have been motivated to do so because the features were required for successful operation of the remote imaging method as disclosed in Hanson.

Claim 3: Hendricks and Hanson disclose an image capturing device as in Claim 2 above, and Hendricks further discloses:

(a) means for detecting direction information corresponding to the direction of movement of the current image with respect to the previous image and/or zoom information corresponding to a change in the size of the part of the current image corresponding to a part of the previous image (page 19, last paragraph); and

(b) means for generating an extracting reference pixel position signal obtained by correcting a previous extracting reference pixel position signal according to the direction and/or zoom information (page 22, 3rd paragraph).

Claim 4: Hendricks and Hanson disclose an image capturing device as in Claim 2 above, and Hendricks further discloses:

(a) means for storing identification information about each of plural camera devices in the remote camera, angularly space apart in their shooting direction (page 19, last paragraph – while not explicitly disclosed, the ID information about each camera must be stored or the system cannot identify individual cameras);

(b) means for detecting direction information corresponding to the direction of movement of the current image with respect to the previous image (page 19, last paragraph); and

(c) means for generating a transmitting camera identification information signal of the camera identification information corresponding to the determined shooting direction (page 22, 3rd paragraph).

Claim 5: Hendricks and Hanson disclose an image capturing device as in Claim 2 above, and Hendricks further discloses:

(a) means for detecting direction information corresponding to the direction of movement of the current image with respect to the previous image and/or zoom information corresponding to a change in the size of the part of the current image corresponding to a part of the previous image (page 19, last paragraph); and

(b) means for generating a shooting direction change signal corresponding to said direction information and/or zoom change signal corresponding to said zoom information (page 19, last paragraph).

Claim 6: Hendricks and Hanson disclose an image capturing device as in Claim 2 above, and Hendricks further discloses:

(a) means for generating a capturing signal corresponding to a portable terminal from the variation information and the previous capturing signal and for updating the signal in memory with the new signal (page 19, last paragraph);

(b) means for sending the generated capturing signal and information for identifying the corresponding portable terminal (page 20, 2nd paragraph); and

(c) means for sending the received video signal to the image display means of the portable terminal indicated by the ID signal (page 22, 1st paragraph).

While Hendricks does not disclose means for receiving the surrounding video signal from a portable terminal or means for detecting variation information corresponding to the portable terminal based on the received and stored video signals,

Hanson does disclose such means. Hanson discloses means for receiving a surrounding video signal from a camera-equipped portable terminal (column 2, lines 36-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the receiving means of Hanson into the device of Hendricks. One would have been motivated to include the receiving means into the device of Hendricks so that the control of the camera would not be limited to a joystick or other manual control.

Additionally, means for detecting variation information corresponding to the correct portable terminal is inherent in the system of Hanson. Without means for detecting variation information, the display processing portion of the system would not be able to function. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include this feature in the device of Hendricks. One would have been motivated to do so because the feature was required for successful operation of the remote imaging method as disclosed in Hanson.

Claim 7: Hendricks discloses an image capturing device comprising:

(a) means for generating a capturing signal that is used to obtain a video signal of a part of a panoramic object (page 19, last paragraph);

(b) means for receiving a video signal sent from a remote camera (page 22, first paragraph);

(c) means for capturing the video signal of a part of the panoramic object based on the capturing signal (page 20, 2nd paragraph); and

(d) means for sending the captured video signal to image display means (page 22, 1st paragraph).

Hendricks does not disclose means for receiving a surrounding video signal from a camera-equipped portable terminal. However, Hanson does disclose means for receiving a surrounding video signal from a camera-equipped portable terminal (column 2, lines 36-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the receiving means of Hanson into the device of Hendricks. One would have been motivated to include the receiving means into the device of Hendricks so that the control of the camera would not be limited to a joystick or other manual control.

Additionally, Hendricks does not disclose means for detecting information about a variation of the image of the current surrounding video signal from the previous image. However, such means are inherent in the system of Hanson. As Hanson discloses, existing systems have a link between the camera-equipped portable terminal (helmet) and a remote device (column 1, lines 42-51). For the remote device to be able to follow the helmet's movement, the helmet must be generating variation information about the surroundings based on the current and previous video signals. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include these two features in the method of Hendricks. One would have been motivated to do so because the features were required for successful operation of the remote imaging method as disclosed in Hanson.

Claim 8: Hendricks and Hanson disclose an image capturing device as in Claim 7 above, and Hendricks further discloses:

- (a) that the video signal is a panorama video signal (page 21, 2nd paragraph);
- (b) means for detecting direction information corresponding to the direction of movement of the current image with respect to the previous image and/or zoom information corresponding to a change in the size of the part of the current image corresponding to a part of the previous image (page 19, last paragraph);
- (c) means for generating an extracting reference pixel position signal obtained by correcting a previous extracting reference pixel position signal according to the direction and/or zoom information (page 22, 3rd paragraph); and
- (d) means for capturing one frame of video signal, a partial image of the panorama image of the panorama video signal, or the corrected reference pixel position signal (page 22, 3rd paragraph).

Claim 9: Hendricks and Hanson disclose an image capturing device as in Claim 7 above, and Hendricks further discloses:

- (a) that the video signal received by the remote image receiving means is video signals from a plurality of camera devices of the remote camera with their shooting directions angularly spaced apart (page 19, last paragraph);
- (b) means for storing identification information about the plurality of camera devices and information corresponding to their shooting directions (page 19, last paragraph – while Hendricks does not explicitly disclose storing means, it is inherent

that identification information about the cameras must be stored for the system to be able to function as described);

(c) means for detecting direction information corresponding to the direction of movement of the current image with respect to the previous image (page 19, last paragraph);

(d) means for generating a transmitting camera identification information signal of the camera identification information corresponding to the determined shooting direction (page 22, 3rd paragraph); and

(e) means for capturing one of a plurality of video signals which corresponds to the generated camera identification signal (page 20, last paragraph).

Claim 10: Hendricks and Hanson disclose an image capturing device as in Claim 9 above, and Hendricks further discloses:

(a) means for detecting direction information corresponding to the direction of movement of the current image with respect to the previous image and/or zoom information corresponding to a change in the size of the part of the current image corresponding to a part of the previous image (page 19, last paragraph);

(b) means for generating an extracting reference pixel position signal obtained by correcting a previous extracting reference pixel position signal according to the direction and/or zoom information (page 22, 3rd paragraph);

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(c) means for capturing one frame of video signal, a partial image of the panorama image of the panorama video signal, or the corrected reference pixel position signal (page 22, 3rd paragraph).

Claim 11: Hendricks and Hanson disclose an image capturing device as in Claim 7 above, and Hendricks further discloses:

(a) means for generating a capturing signal corresponding to a portable terminal from the variation information and the previous capturing signal and for updating the signal in memory with the new signal (page 19, last paragraph);

(b) means for capturing a video signal for each capturing signal corresponding to each portable terminal (page 20, 2nd paragraph); and

(c) means for sending the captured video signal for each portable terminal to the correct image display means (page 22, first paragraph).

While Hendricks does not disclose means for receiving the surrounding video signal from a portable terminal or means for detecting variation information corresponding to the portable terminal based on the received and stored video signals, Hanson does disclose such means. Hanson discloses means for receiving a surrounding video signal from each of a plurality of camera-equipped portable terminals (column 2, lines 36-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the receiving means of Hanson into the device of Hendricks. One would have been motivated to include the receiving means

into the device of Hendricks so that the control of the camera would not be limited to a joystick or other manual control.

Additionally, means for detecting variation information corresponding to the correct portable terminal is inherent in the system of Hanson. Without means for detecting variation information, the display processing portion of the system would not be able to function. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include this feature in the device of Hendricks. One would have been motivated to do so because the feature was required for successful operation of the remote imaging method as disclosed in Hanson.

Claims 12/2 and 12/7: Hendricks and Hanson disclose an image capturing device as in Claims 2 and 7 above. While neither Hendricks nor Hanson disclose storing the hysteresis of the variation info, deciding if the variation information is normal based on the hysteresis and inhibiting transmission of the variation information if it is abnormal, hysteresis is a well known technique for protecting systems against rapid change or fluctuation and rejecting extraneous information. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention that storing the hysteresis, judging the variation information based on the hysteresis and rejecting variation information considered abnormal could be employed in the system of Hendricks. One would have been motivated to do so to prevent the remote cameras from rapid, narrow oscillations, extending the life of the image sensing devices.

Claim 13: Hendricks discloses a processing method of an image capturing device comprising:

(a) a step of deciding whether an operation command for changing the shooting direction of a camera and/or the zoom amount is received or not (page 22, 3rd paragraph);

(b) a step of generating a capturing signal for capturing a video signal of a part of a panoramic object based on the previous signal and the variation information (page 19, last paragraph);

(c) a step of sending the generated capturing signal to a remote image sensing device (page 7, 2nd paragraph);

(d) a step of receiving a video signal from the remote image sensing device (page 22, 1st paragraph);

(e) a step of sending the received video signal to image display means at the same position of the portable terminal (page 22, first paragraph).

Hendricks does not disclose a step receiving a surrounding video signal from a camera-equipped portable terminal. However, Hanson does disclose a step of receiving a surrounding video signal from a camera-equipped portable terminal (column 2, lines 36-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the step of Hanson into the method of Hendricks. One would have been motivated to include the step into the method of Hendricks so that the control of the camera would not be limited to a joystick or other manual control.

Additionally, Hendricks does not disclose a step of detecting information about a variation of the image of the current surrounding video signal from the previous image. However, such a step is inherent in the method of Hanson. As Hanson discloses, existing systems have a link between the camera-equipped portable terminal (helmet) and a remote device (column 1, lines 42-51). For the remote device to be able to follow the helmet's movement, the helmet must be generating variation information about the surroundings based on the current and previous video signals. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include this step in the method of Hendricks. One would have been motivated to do so because the step was required for successful operation of the remote imaging method as disclosed in Hanson.

Hendricks does not disclose a step of deciding whether a camera stop command is received. However, it would have been obvious to one having ordinary skill in the art at the time of the invention that a stop command could be implemented in the method of Hendricks. One would have been motivated to implement a stop command to decrease processing load on the image capturing device. Deciding whether the stop command was received would then be a normal operation to limit processing load.

Hendricks does not disclose skipping the processing if the operation command is not received and looping if the stop command is not received. However, it would have been obvious to one having ordinary skill in the art at the time of invention to implement the process in this fashion. One would have motivated to implement the process in this fashion to reduce the processing load and avoid processing errors.

Claim 14: Hendricks discloses a processing method of an image capturing device comprising:

(a) a step of deciding whether an operation command for changing the shooting direction of a camera and/or the zoom amount is received or not (page 22, 3rd paragraph);

(b) a step of generating a capturing signal for capturing a video signal of a part of a panoramic object based on the previous signal and the variation information (page 19, last paragraph);

(c) a step of receiving a video signal from the remote image sensing device (page 22, 1st paragraph);

(d) a step of capturing a video signal of part of a panoramic object from the received video signal based on the generated capturing signal;

(e) a step of sending the received video signal to image display means at the same position of the portable terminal (page 22, first paragraph).

Hendricks does not disclose a step receiving a surrounding video signal from a camera-equipped portable terminal. However, Hanson does disclose a step of receiving a surrounding video signal from a camera-equipped portable terminal (column 2, lines 36-39). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include the step of Hanson into the method of Hendricks. One would have been motivated to include the step into the method

of Hendricks so that the control of the camera would not be limited to a joystick or other manual control.

Additionally, Hendricks does not disclose a step of detecting information about a variation of the image of the current surrounding video signal from the previous image. However, such a step is inherent in the method of Hanson. As Hanson discloses, existing systems have a link between the camera-equipped portable terminal (helmet) and a remote device (column 1, lines 42-51). For the remote device to be able to follow the helmet's movement, the helmet must be generating variation information about the surroundings based on the current and previous video signals. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include this step in the method of Hendricks. One would have been motivated to do so because the step was required for successful operation of the remote imaging method as disclosed in Hanson.

Hendricks does not disclose a step of deciding whether a camera stop command is received. However, it would have been obvious to one having ordinary skill in the art at the time of the invention that a stop command could be implemented in the method of Hendricks. One would have been motivated to implement a stop command to decrease processing load on the image capturing device. Deciding whether the stop command was received would then be a normal operation to limit processing load.

Hendricks does not disclose skipping the processing if the operation command is not received and looping if the stop command is not received. However, it would have been obvious to one having ordinary skill in the art at the time of invention to implement

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the process in this fashion. One would have motivated to implement the process in this fashion to reduce the processing load and avoid processing errors.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Meyers whose telephone number is (571) 270-1690. The examiner can normally be reached on Mon-Fri 7AM-4PM (Alt Fridays Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on (571) 270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JM
5/21/2007



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